Patent claims

1. A method for measuring a pressure in a region which is closed off by a solenoid valve, having the following steps of:
- applying a voltage to the solenoid valve,
- determining a peak point of the current flowing on account of the voltage,
- determining the pressure based on the determination of the peak point.

2. The method as claimed in claim 1, the peak value of the current being measured at the peak point, and the pressure being determined on the basis of the peak value.

3. The method as claimed in claim 1 or 2, the pressure being determined by means of a family of characteristic curves.

4. The method as claimed in claim 1, 2 or 3, the pressure being determined by calculation.

5. The method as claimed in one of the preceding claims 1 to 4, the voltage being increased step by step by increasing a pulse width modulation ratio step by step, and the pressure being determined on the basis of the pulse width modulation ratio at the peak point.

6. The method as claimed in claim 5, the peak value of the current being determined from the pulse width modulation ratio at the peak point and a coil resistance of the solenoid valve, and the pressure being determined on the basis of the peak value.

7. The method as claimed in one of the preceding claims 1 to 6, a temperature dependence of the coil resistance of the solenoid valve being taken into

account for determining the pressure on the basis of the peak value of the current.

8. The method as claimed in one of the preceding claims 5, 6 or 7, the pulse width modulation ratio at the peak point being referred to a standard voltage.

9. The method as claimed in claim 8, the solenoid valve being calibrated by means of the standard voltage.

10. The method as claimed in one of the preceding claims 1 to 9, the region being a working volume of a gas spring, in particular of an air spring.

11. A computer program for calculating a pressure in a region which is closed off by a solenoid valve, having program means for carrying out the following steps of:

- determining a peak point of the current flowing on account of a voltage applied to the solenoid valve,
- determining the pressure on the basis of the determination of the peak point.

12. The computer program as claimed in claim 11, the pressure being determined on the basis of the peak value of the current at the peak point.

13. The computer program product as claimed in claim 11 or 12, having a characteristic curve for determining the pressure on the basis of the peak value of the current at the peak point.

14. The computer program product as claimed in claim 11, 12 or 13, the program means being designed for calculating the pressure on the basis of the peak point.

15. The computer program product as claimed in one of the preceding claims 11 to 14, the program means being designed for increasing the voltage step by step by increasing a pulse width modulation ratio step by step, and for determining the pressure on the basis of the pulse width modulation ratio at the peak point.

16. The computer program product as claimed in claim 15, the program means being designed for calculating the peak value of the current from the pulse width modulation ratio at the peak point and from the coil resistance of the solenoid valve.

17. A device for determining a pressure in a region which is closed off by a solenoid valve (106; 406), having a control unit (110; 410) for applying a voltage to the solenoid valve, the control unit being designed for determining a peak point (S) of the current (I) flowing on account of the voltage and for determining the pressure on the basis of the peak point.

18. The device as claimed in claim 17, having means (114; 420, 424) for determining the peak value (I_switching) of the current at the peak point (S), the control unit being designed for determining the pressure on the basis of the peak value.

19. The device as claimed in claim 17 or 18, the control unit being designed for increasing step by step a pulse width modulation ratio of the voltage applied to the solenoid valve and for determining the pressure on the basis of the pulse width modulation ratio at the peak point.